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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,102	03/05/2001	Arthur Van Brempt	2530-19	8898

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ART UNIT	PAPER NUMBER
1761	9

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Please find below and/or attached an Office communication concerning this application or proceeding.

TP

Office Action Summary

Application No.	Applicant(s)
09/720102	Van Brempteral
Examiner	**Group Art Unit**
Sayala	1761

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-18 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-18 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)–(d)

☑ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)–(d).

☑ All ☐ Some* ☐ None of the:

☑ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO–1449, Paper No(s). 5

☒ Notice of Reference(s) Cited, PTO–892

☐ Notice of Draftsperson's Patent Drawing Review, PTO–948

☐ Interview Summary, PTO–413

☐ Notice of Informal Patent Application, PTO–152

☐ Other _____

Office Action Summary

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, "partly molten material" is indefinite because there is insufficient antecedent basis for this limitation in the claim.
In claim 1, "other desired" fails to describe what other solid materials are to be included.
In claims 13 and 18, "preferably" is indefinite because the metes and bounds of the claim is confusing because of the use of this language. Is applicant claiming only the preferred embodiment?

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application

filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 74049116.

✓

'116 describes fertilizers consisting of urea, phosphates and potassium salts mixed in a molten salt and granulated and the product is screened and cooled.

5. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by SU 304824.

✓

'824 teaches molten ammonium phosphate is mixed with a urea melt at 130° C. The melt is cooled and granulated.

6. Claims 1, 7 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoogendonk et al. (US Patent 4398936)

Hoogendonk et al. teach a molten solution of ammonium phosphate and a nitrate and potassium chloride. See abstract, col. 2, lines 48-54. The resulting mixture is granulated. See claim 1.

7. Claims 1, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 07157385 ✓

'385 teaches mixing molten urea with potassium salts, calcium cyanide and phosphate salts and then granulating the mixture. Temperature used to melt: 100-140° C. See page 1 of translation.

8. Claims 1-3, 7, 13-14, 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 1462633

'633 teaches a mixture of molten urea at a temperature of 130-137°C and mixing in phosphate or KCl and produced by the process claimed as shown for urea. The molten urea is then cooled, granulated and screened and the oversized granules recycled. See col. 1, page 2, lines 48-50, col. 2, lines 55-100, col. 1, page 2, lines 1-10, 25-45, example 1, claims 9-11. ✓

9. Claims 1-2, 3, 7, 12-13 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 1159445.

'445 teaches a fertilizer mixture in a dry powdered form, heating them and granulating them. See claims 1-14. See example 6 which teaches recycling. After granulation, col. 1, page 2, lines 35+ teaches that they are screened and then recycled. The process is carried out continuously. ✗

10. Claims 1-3, 7, 13, 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Kieweg (US Patent 2912318).
'318 teaches in example 2 and claim 1, melting ammonium nitrate and combining with ammonium monohydrogen phosphate, heating to 375°F. The mixture is cooked and granulated. See also col. 1, lines 65-72. Col. 3, lines 60+, describes screening and recycling.

11. Claims 1-3, 7-13 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0104705.

'705 teaches melting NH_4NO_3 and mixing in solid KCl in a 1:1 ratio. KCl can be preheated and ammonium nitrate heated between 140-180 degrees Celsius. The mix is cooled, granulated, crushed, screened and recycled. See page 3, lines 10+. Part of the KCl can be fed to the granulating zone, as also ammonium phosphate. Claim 2 limitations are inherent because example 1 indicates a continuous process apparatus/system was used, and to control flow rate, heating rates etc are inherent procedures in such a system. Note the exit temperature of the granulation is 90°C, page 5, line 2, and the moisture content of about 0.6 % by weight.

12. Claims 1-3, 7, 12-13 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Obrestad et al (US Patent 6176892)
See col. 3, lines 1-23, example 1-2. Note the temperatures and water content at col. 2, lines 55-60. Granulation temperatures are given at col. 3. See also claims 1-2 and 7.

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 4-6 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1462633 and EP 0104705 in view of Elrod et al. (US Patent 5676729), and the specification at page 6, lines 1-7 and further in view of SU 1353765 and EP 0376853.

Both the GB and EP patents are as described above. The patents do not teach using hot air to melt the fertilizer or the temperatures of claim 5. However, to use known methods of heating such as hot air, does not lend patentability to the instant claims over the disclosure of the GB and EP patents. To adjust amounts of fertilizers and to use temperatures high enough to melt them, would have been obvious to one of ordinary skill in the art because such conditions would depend on the particular fertilizer selected and used and its corresponding melting point.

Elrod et al teach that to use fillers with fertilizers like molten urea, is beneficial because it improves anticaking and hardness. See col. 23 and col. 4, lines 1-6. The specification at page 6 discloses that using fillers with fertilizers is conventional. See '765 that teaches that adding boron to ammonium nitrate melt is advantageous. Further, the addition of

micronutrients to fertilizers is well known in the art. EP '853 teaches adding micronutrients and ammonium polyphosphate to molten urea. See abstract and page 4, lines 26-32. Therefore, the addition of fillers and micronutrients to the fertilizer melts of the GB patents would have been obvious to one of ordinary skill in the art at the time the invention was made.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Examiner **C. Sayala** at **Group 1761**, telephone number (703) 308-3035. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661. The fax phone number for this Group is (703)305-7718.

C. Sayála
Primary Examiner
Group 1761.